

(12) **UK Patent Application** (19) **GB** (11) **2 253 822 A** (13)

(43) Date of A publication 23.09.1992

(21) Application No 9105866.9

(22) Date of filing 20.03.1991

(71) Applicants

Alexander Orr
1 Strathcarron, Law, Carlisle, Lanarkshire, ML8 5LJ,
United Kingdom

Robert Ronald Orr
74 Mosshall Road, Newarthill, Lanarkshire, ML1 5HU,
United Kingdom

(72) Inventors

Alexander Orr
Robert Ronald Orr

(74) Agent and/or Address for Service

Fitzpatrick
4 West Regent Street, Glasgow, G2 1RS,
United Kingdom

(51) INT CL⁵
B60J 3/02

(52) UK CL (Edition K)
B7J J63

(56) Documents cited
GB 2232136 A GB 2194497 A GB 2156294 A
GB 2153313 A GB 0530089 A EP 0345374 A1

(58) Field of search
UK CL (Edition K) B7J
INT CL⁵ B60J 3/02

(54) Anti-dazzle shield

(57) An anti-dazzle shield comprises a tinted screen (11) of a length comparable with a vehicle visor (10) which is frictionally hinged at its upper edge. Means are provided comprising for example a clamp (12), for frictionally hinged mounting the upper edge of the screen (11) to the lower edge of the visor (10).

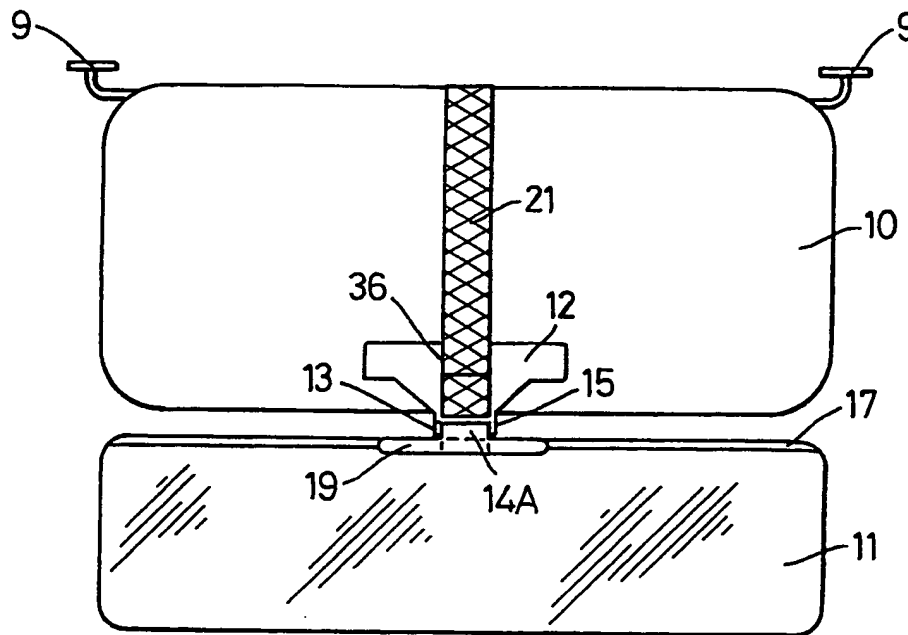


Fig. 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.
The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

GB 2 253 822 A

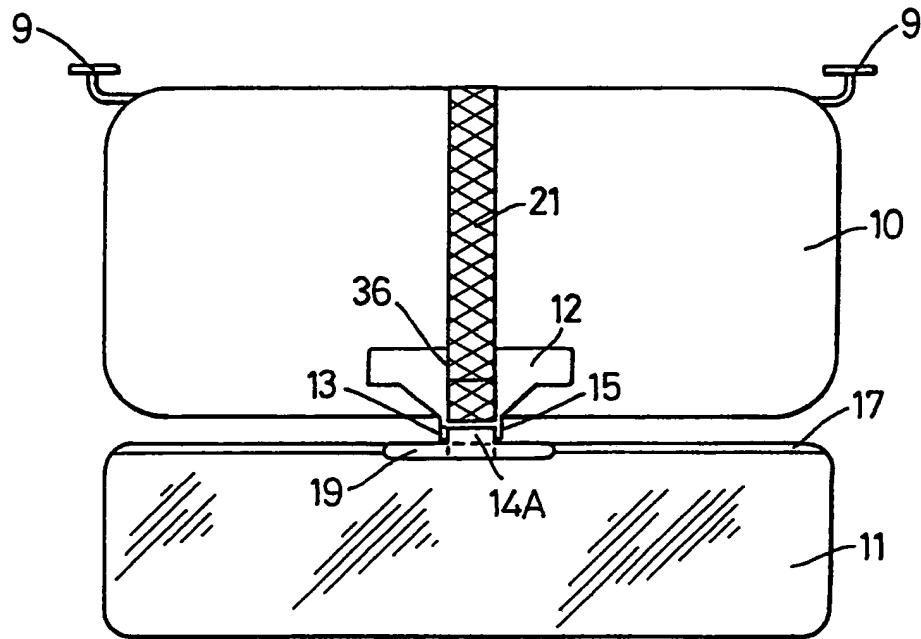


Fig. 1

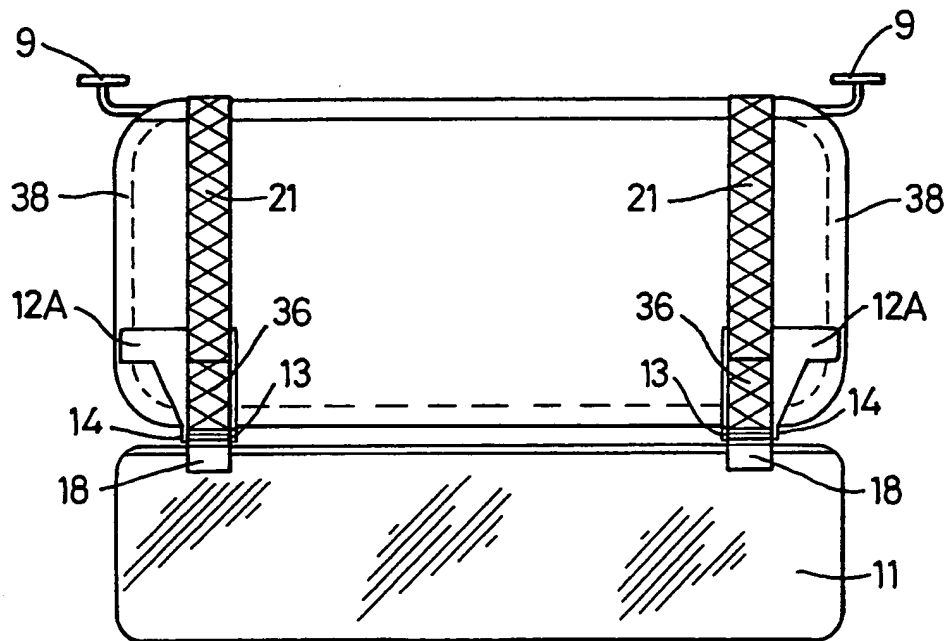


Fig. 2

2/10

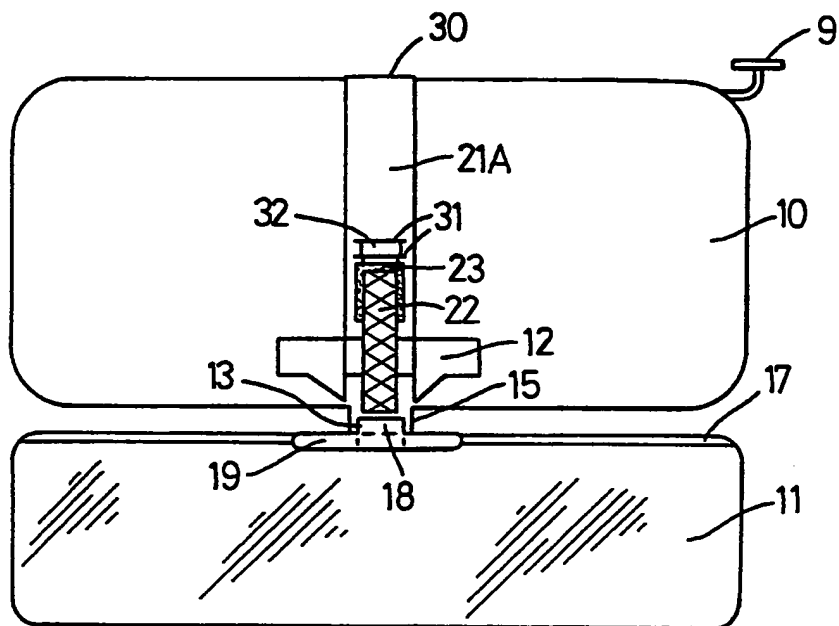


Fig. 3

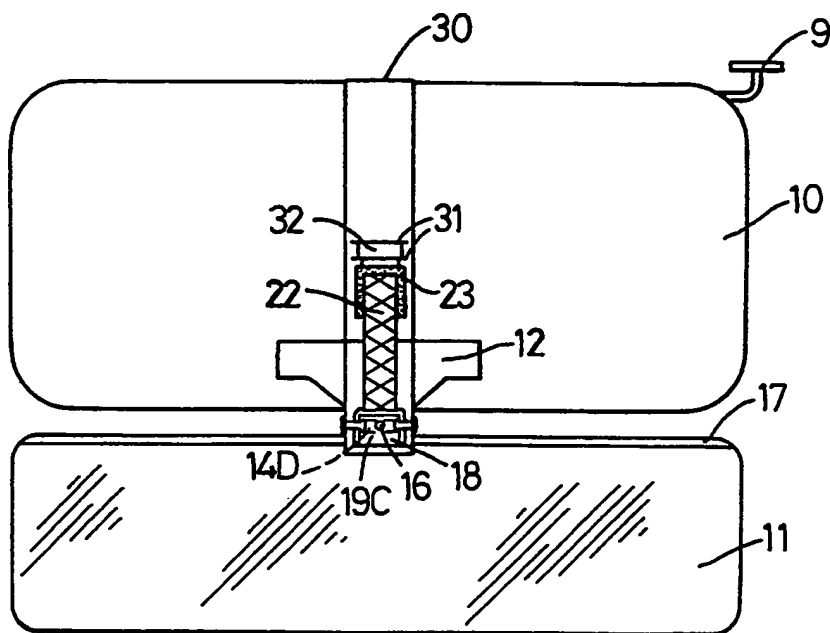
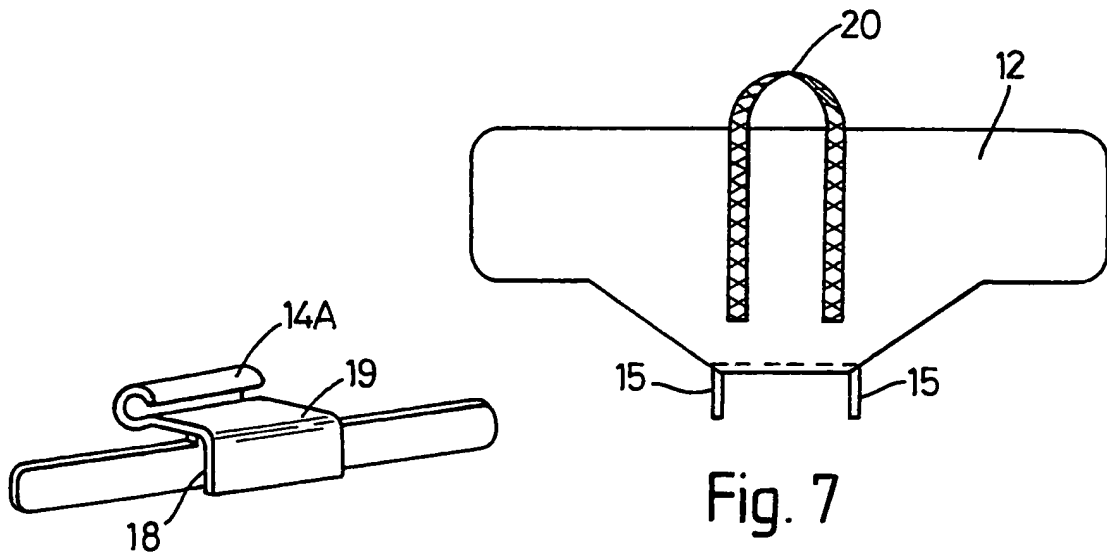
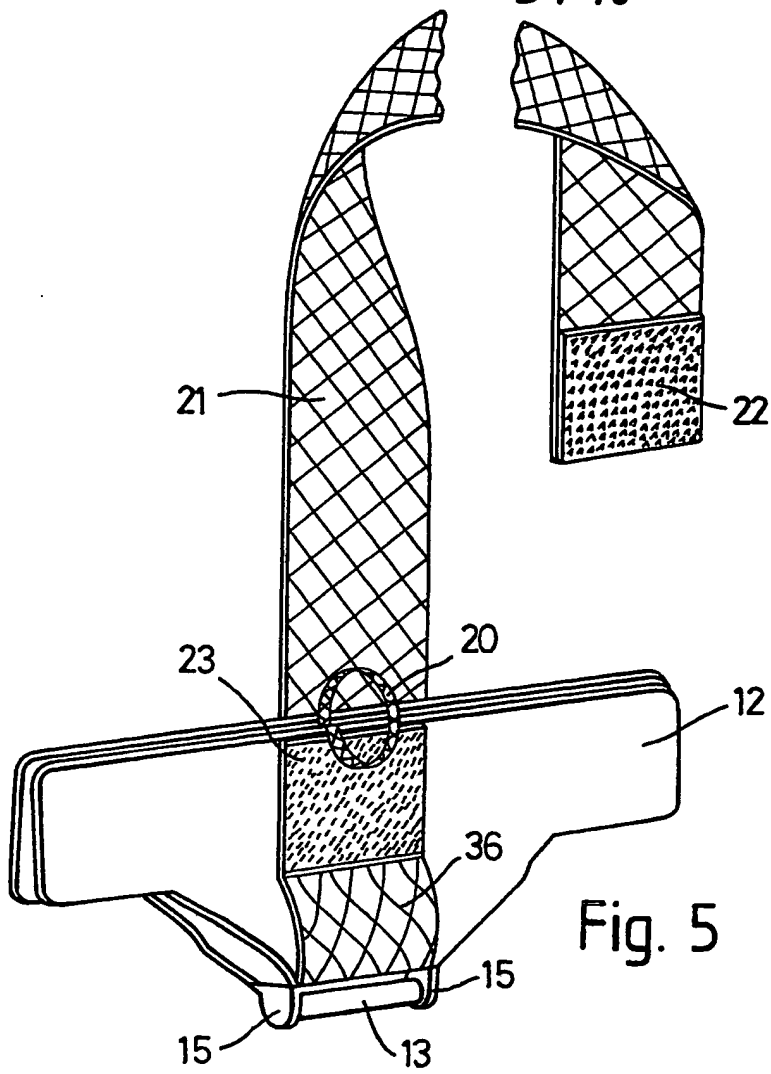
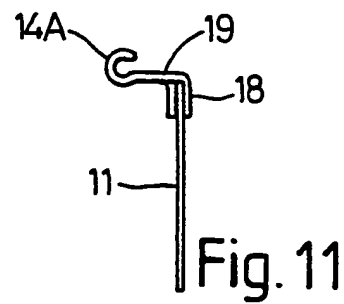
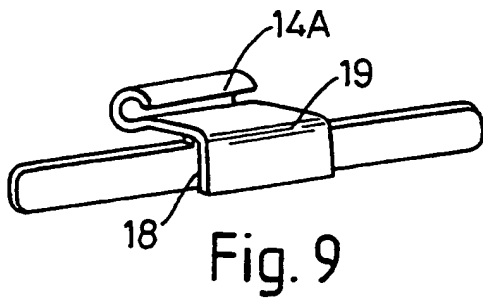
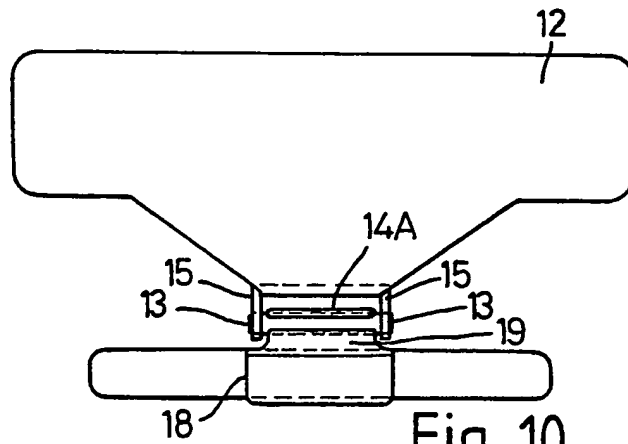
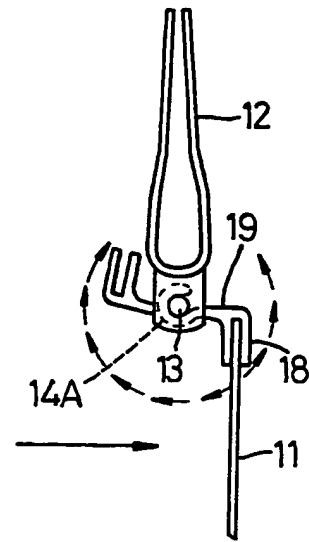
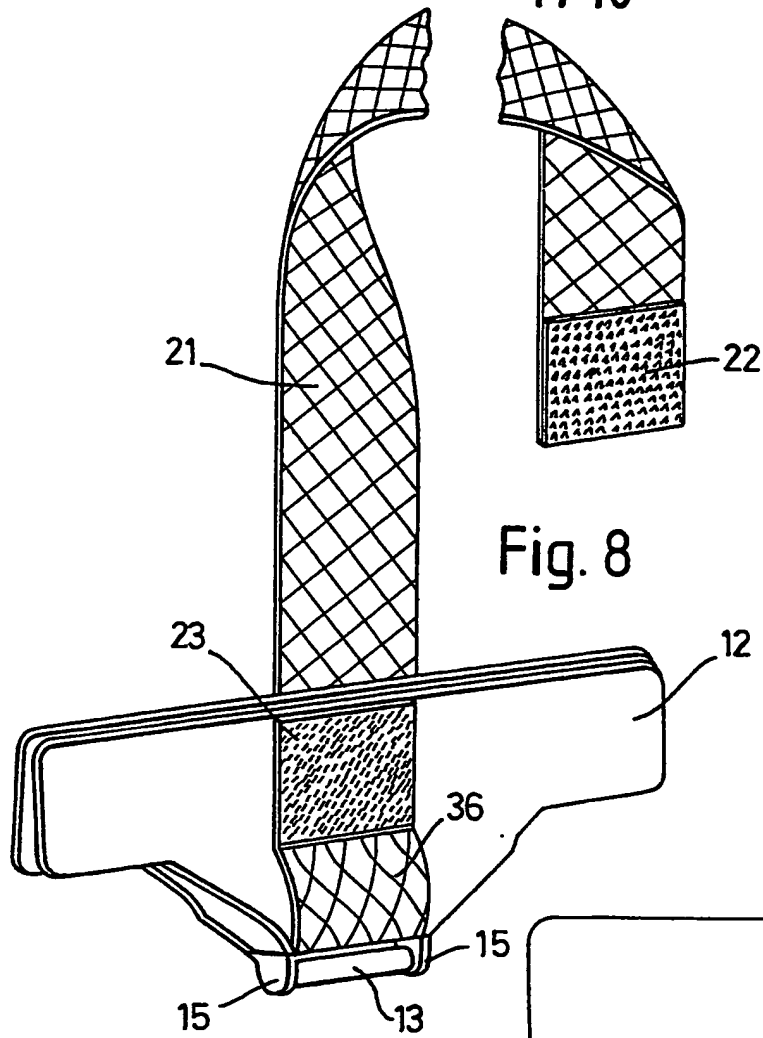


Fig. 4

3/10



4/10



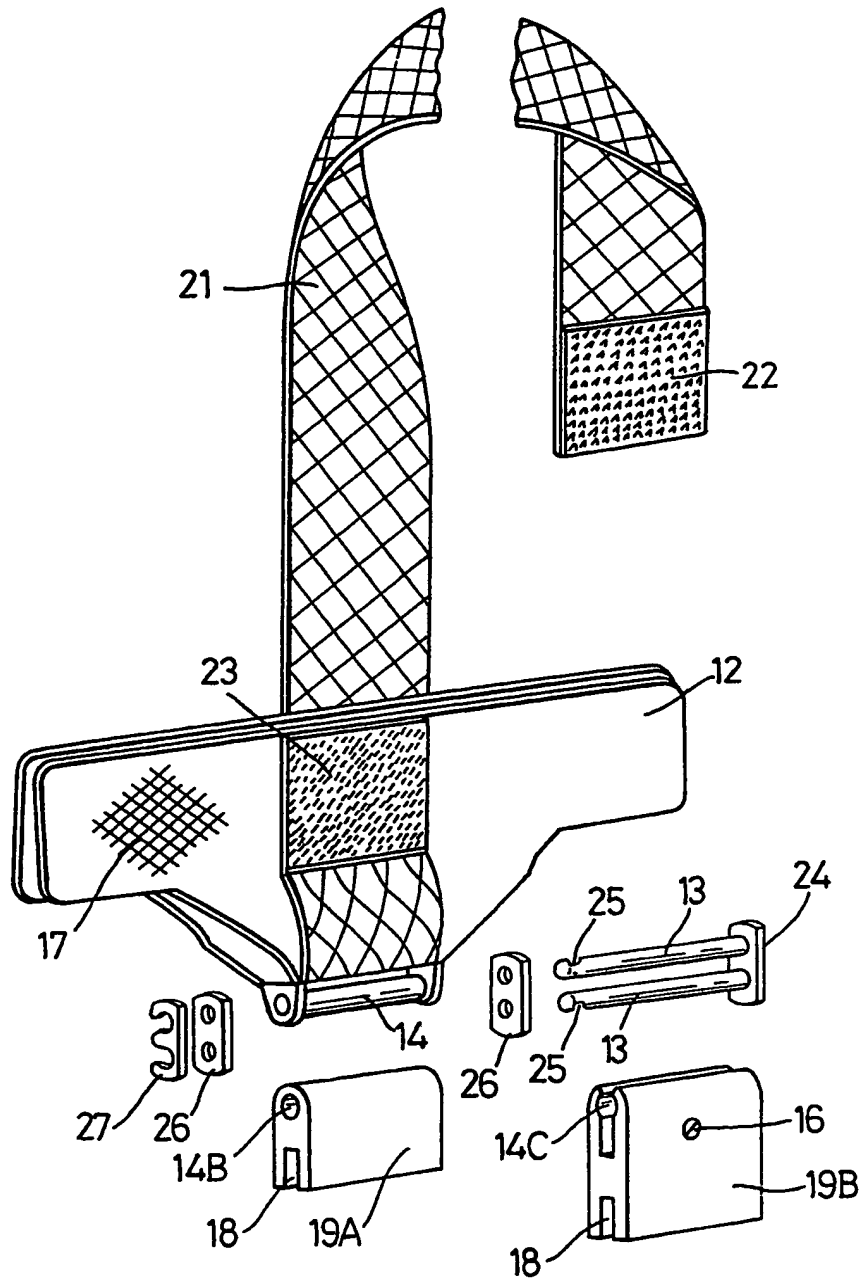


Fig. 13

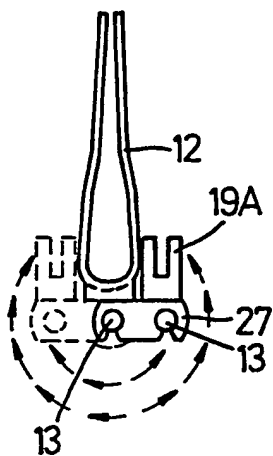


Fig. 14

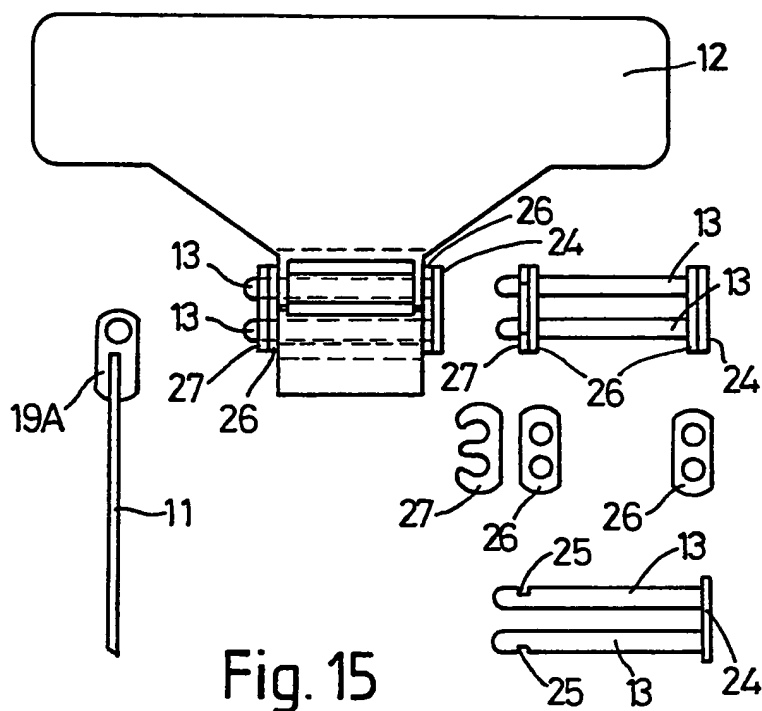


Fig. 15

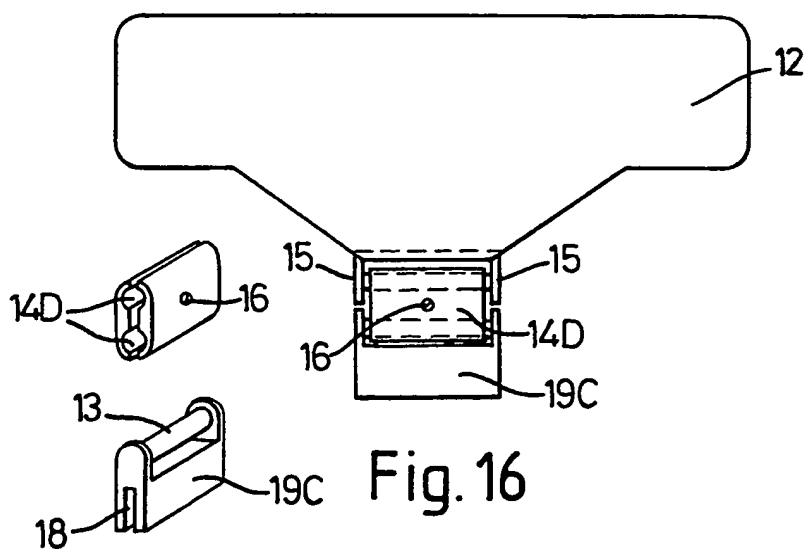


Fig. 16

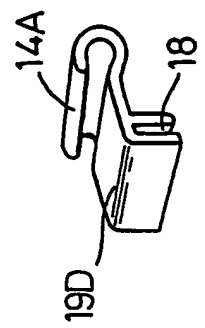
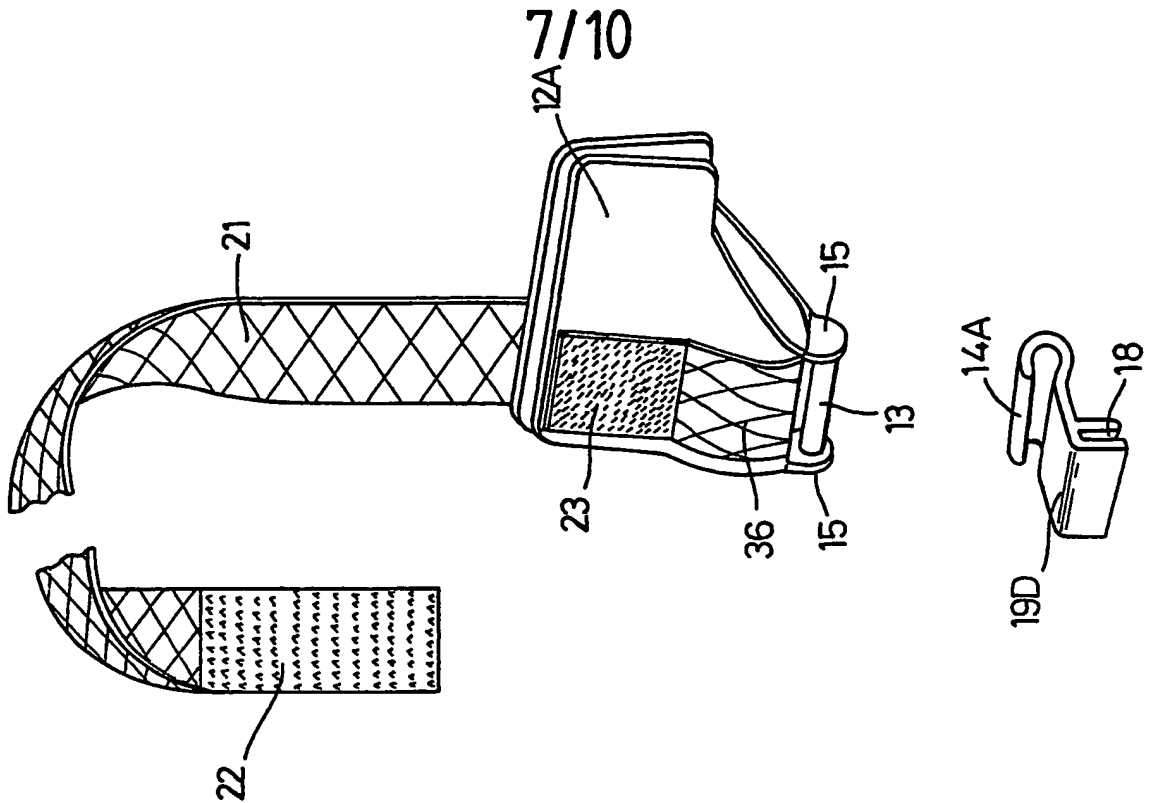
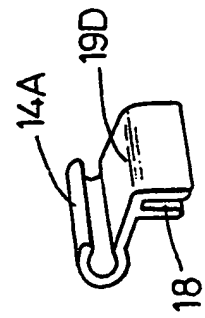
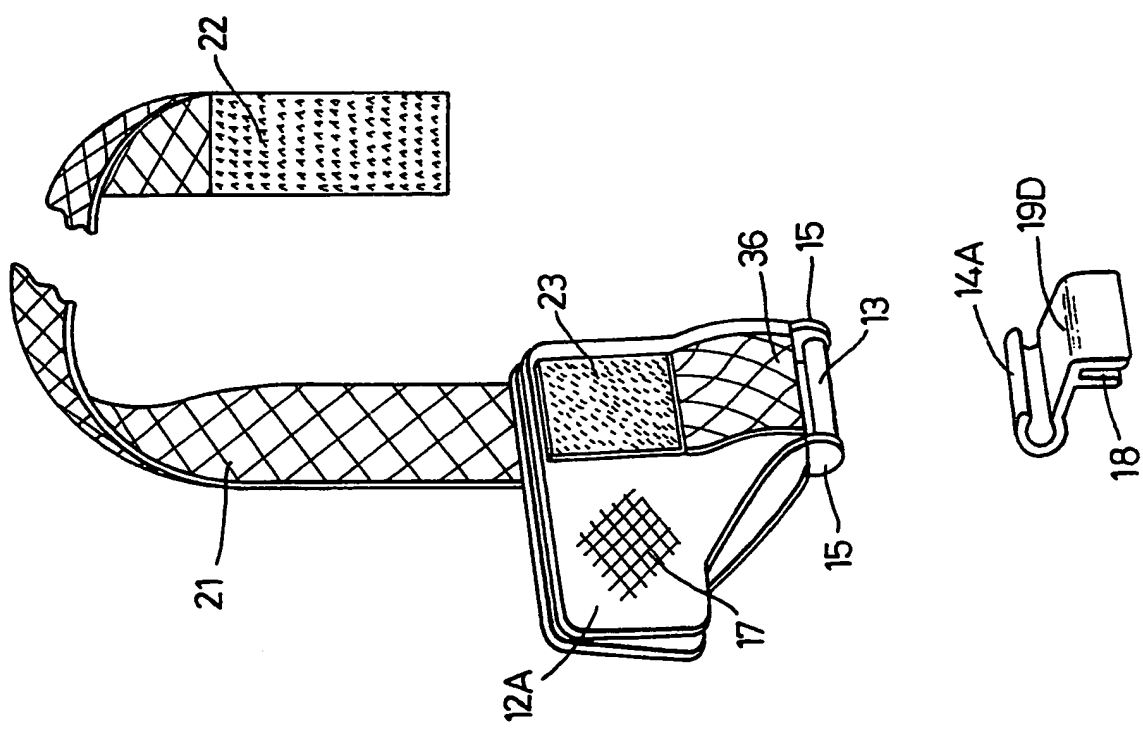
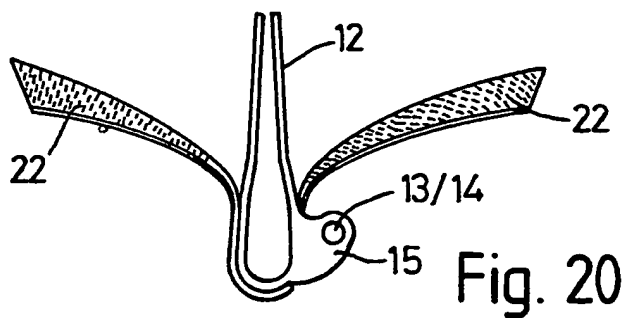
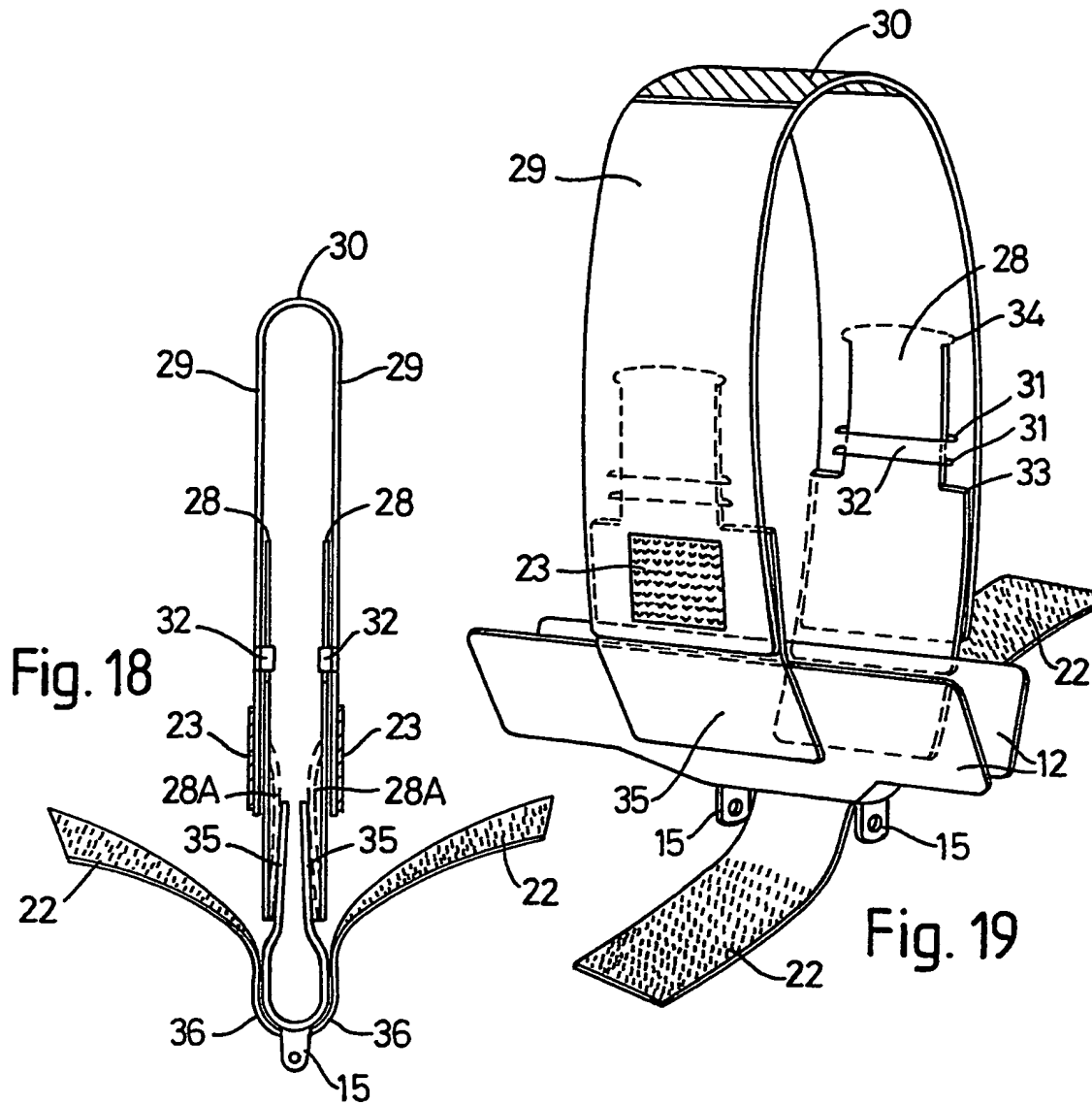


Fig. 17





9/10

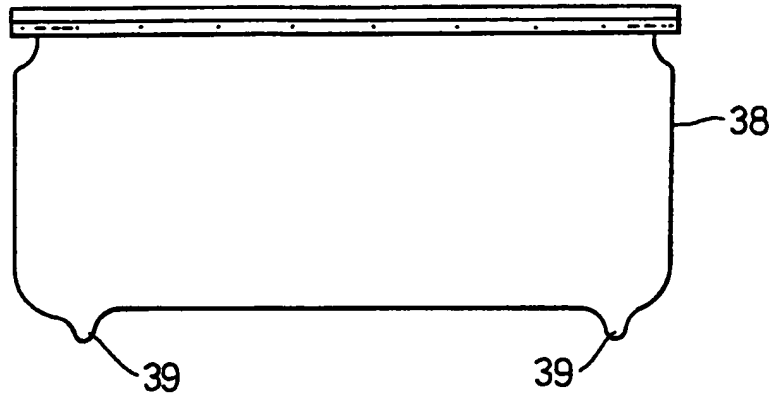


Fig. 21

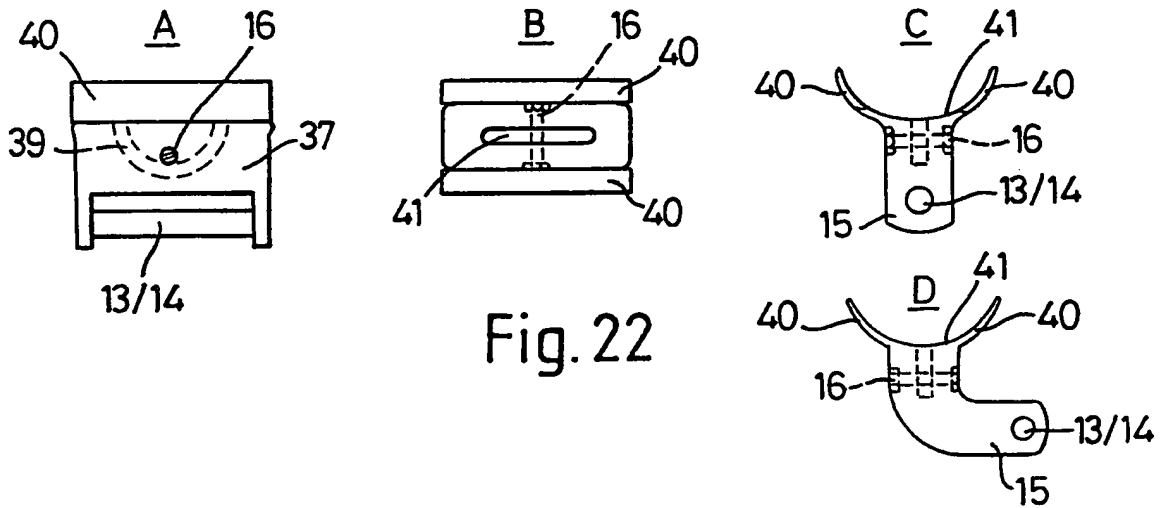


Fig. 22

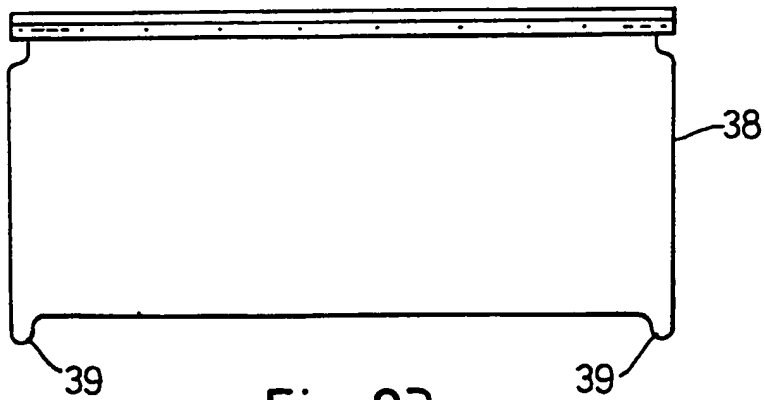


Fig. 23

10/10

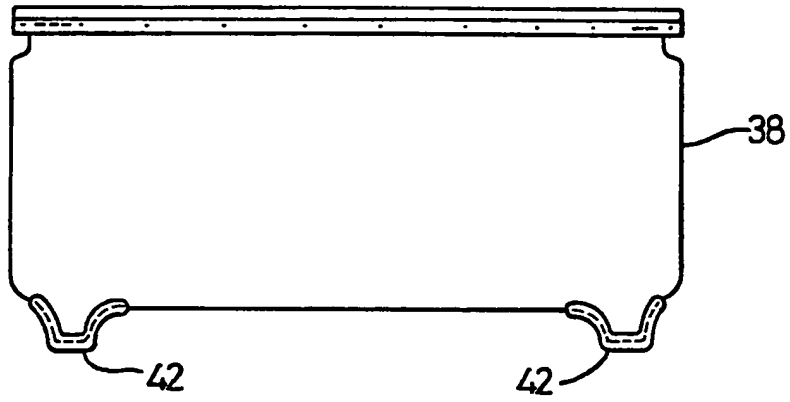


Fig. 24

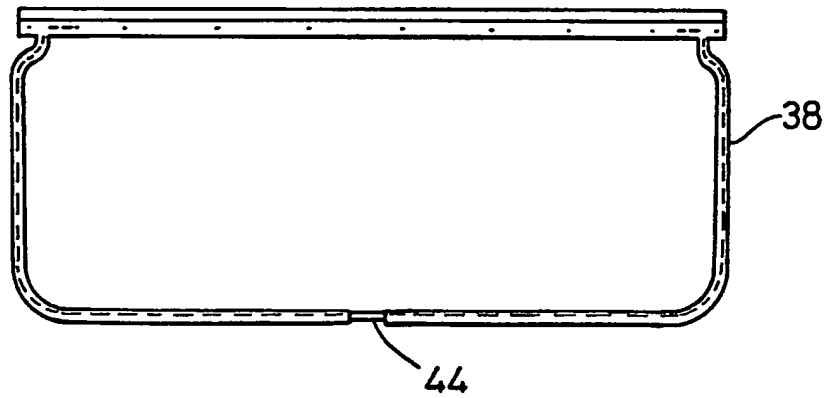


Fig. 25

Anti-Dazzle ShieldDescription

This invention relates to an Anti-Dazzle Shield that can be used with a motor driven vehicle's sun visors with safety being the predominant factor.

It is a well known fact that motorists driving suddenly into the bright dazzling glare of a low setting sun and reflections of same from smooth shining surfaces can become completely disorientated, the road and traffic ahead disappears in a ball of intense dazzling light causing great confusion sometimes ending with disastrous results. The sun's reflections from wet roads and snow also take their toll. Sun glasses can be of some benefit if one is wearing the proper type at that particular moment.

The object of the invention is to provide an Anti-Dazzle Shield which can be brought into use in an instant when required.

According to the invention there is provided an Anti-Dazzle Shield comprising a tinted screen of a length comparable with a vehicle visor which is frictionally hinged at its upper edge, and means for frictionally hinged mounting the upper edge of the screen to the lower edge of the visor.

Ideally, the screen is flexible and unbreakable so that, when in use, the screen would act as a protection for the driver and front seat passenger against facial lacerations from a shattered windscreen.

Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 shows the Anti-Dazzle Shield incorporated with a vehicle's existing visor by means of a central double wing fitting;

Figure 2 shows the same as Figure 1 except that connection is made by means of two end half wing fittings;

Figure 3 shows the same as Figure 1 except with a different safety strap;

Figure 4 shows the same as Figure 3 with double hinge swivel;

Figure 5 shows in perspective the central fitting clamp, safety strap and finger pull tags;

Figure 6 shows in perspective a tinted screen snap on bracket;

Figure 7 shows a finger pull tag fixed to the inside face of one side of a double wing clamp;

Figure 8 shows the same as Figure 5, but not showing finger tags;

Figure 9 shows the same as Figure 6;

Figure 10 shows a fitted snap-on tinted screen bracket to clamp hinge pin;

Figure 11 shows an end view of clamp and snap-on bracket with attached tinted screen;

Figure 12 shows an end view of clamp with Figure 11 attached;

Figure 13 shows a clamp, as Figure 5, now showing finger tags, below which is shown a perspective view of a hinge fitting assembly;

Figure 14 shows an end view of a clamp with Figure 13 hinge fitting assembly in two storage positions;

Figure 15 shows hinge assembly Figure 13 fitted to clamp hinge bush;

Figure 16 shows a double hinge unit fitting with Figures 13 and 14 hinge pin assembly;

Figure 17 shows a left and right clamp and tinted screen snap-on hinge bush brackets;

Figure 18 shows an end view of clamp and retaining strap of Figure 3;

Figure 19 shows a deliberate spread-eagled view of Figure 18 hinge bush or hinge pin not shown;

Figure 20 shows a clamp with right angle hinge point;

Figure 21 shows a modified wire skeleton frame of a vehicle's standard existing visor;

Figure 22 shows four drawings of a plastic moulded hinge bracket attachment;

Figures 23, 24 and 25 show modified skeleton frames of a vehicle's standard existing visor.

Figure 1 shows the anti-dazzle shield incorporated with a vehicle's existing visor 10 having two end frictional hinge brackets 9 as viewed from within a vehicle in the fully down position. The shield has a measured tinted polycarbonate screen 11 or similar material with the top edge padded 17. A plastic moulded clamp 12 incorporating a hinge pin 13 positioned centrally on the lower edge of the vehicle visor 10, a right-angled snap-on tinted screen holder bracket 18 is attached to the hinge pin 13 by addressing the open end of the snap-on bush 14A to the hinge pin 13 and pushing firmly into position which allows frictional movement of over 180°. The tinted screen 11 is firmly adhesively fixed centrally into the two inside faces of the screen holder 18 at the end of the tinted screen holder bracket 19. Attachment of the clamp 12 to the vehicle's existing visor 10 is accomplished by opening the walls of the clamp 12 using the finger pull tags 20 attached to the two inside faces of the mounting clamp 12. By pulling the two tags 20 apart and opening the two wings of the clamp 12 sufficiently, positioning over and on the centre of the vehicle's visor 10 and releasing then the clamp 12 is then held firmly in position by a safety strap 21 which is looked over the vehicle's visor 10 and fastened at the opposite side of the clamp 12 by a velcro hook 22 and loop 23 fastening or other secure and safe padded means. Details are shown in Figures 5, 6 and 7.

Figure 2 shows the same as Figure 1 except that for larger vehicle visors 10 connection is made by means of two end half wing clamps 12A both incorporating a hinge pin 13 similar to clamp 12 positioned at each end of the vehicle visor 10 and also with smaller right angled screen holder brackets 19D. Fitting as described in Figure 1 and attachment of the two mounting clamps 12A to the vehicle visor 10 is similar as described in Figure 1. Finger pull tags 20 not shown in Figure 17, which shows the half wing clamps in perspective.

Figure 3 shows the same as Figure 1 with the same type of mounting clamp 12 but with a different safety strap (21A) which is comprised of two sections, an inner section 28 and an outer section 29 attached together in an elliptical manner that allows them to slide open or close whatever is required to fit snugly to the different depth of the vehicle's visors 10 to which it is being fitted then held to the position by means of elasticated tape and velcro fastening. The detailed drawings of Figures 18 and 19 help to describe it. The inner section is comprised of three parts, the mounting clamp 12 and two flexible plastic broad straps, the shapes of which are shown more clearly in Figure 19 which is a deliberate spread-eagled drawing in perspective in order to show how this unit is put together. The Figure 18 shows the outer top section 29 has a moulded curved top 30 running down into flexible plastic broad straps each side, each of the straps are slotted in two places 31 two thirds down from the moulded curved top 30, leaving ample material between the end of the cut slots 31 and the outside edges of the outer section 29, for the strip sections 32 between the slots to be pulled inwards so allowing the top part of the inner section 28 which has the appearance of a bottle neck to pass through between the strip 32 and the inside surface of the outer section 29. This application to both inner and outer sections at each side allows freedom of movement up or down of the two sections 28 and 29. The inner sections 28 have shoulder stops 33 to allow minimum closure and at their top are stop ends 34 to allowing maximum opening and also to keep the two sections from coming apart when fitting to the vehicle's visor 10. The inner section 28 is permanently attached by adhesive to the outer surface of the two wings at point 35 of mounting clamp 12. A velcro loop pad 23 is permanently fixed to a position just under the slotted areas on each side of the flexible plastic strap 28. The twin dotted lines 28A showing from the inner surfaces of the wings of the clamp 12 shows the present position of the whole unit before attaching it to the vehicle's visor 10. Attachment of the unit is accomplished by slewing the vehicle's visor 10 outwards on its frictional hinge bracket 9 and exposing the

opposite end and by separating the hook and loop velcro fastening 22 and 23 slide the two sections 28 and 29 apart vertically enough to go over the end of the vehicle visor then by pulling apart both sides of the flexible plastic straps 28 and 29 opening the mounting clamp 12 and placing over the vehicle's visor and centralising it then pulling upwards until the clamp 12 is in its position it is released, push the outer section 29 downwards until the curved top 30 is snugly fitted over the top of the vehicle's visor 10 attached the velcro tape fastener 22 and 23 together. The central area of tape fastener 36 is permanently attached to the underside of clamp 12. A hinge pin or hinge bush is not shown between the lugs 15. Padding 27 is not shown as it obscures and misleads.

Figure 4 shows the same as Figure 3 except that it shows in perspective an adjustable split double hinger brush 14D as shown in Figure 16 with a matching tinted screen holder bracket 19C. The split double hinged bush 14D is in two halves and held together with a threaded bolt and nut 16 which are countersunk under the surface, when this bolt is unscrewed one bush is connected to the hinge pin 13 on the mounting clamp 12 and the other end to the hinge pin 13 on screen holder 19C; the central countersunk nut and bolt is tightened and adjusted by screwdriver for suitable frictional grip movement by means of the top hinge bush on 14D and, this revolving around the fixed hinge pin 13 on the clamp 12 and the fixed hinge pin 13 on the screen holder bracket 19C revolving around the inside of the lower hinge bush of 14D which allows a maximum 360° movement of the tinted screen 11 and can also be stores on either side of the vehicle's visor 10.

Figures 5, 6 and 7 previously described in conjunction with Figure 1. Figures 8, 9, 10 and 11 shows the attachment of the snap-on screen holder bracket 19 as described in Figure 1.

Figure 12 shows an end view of the clamp 12 with snap-on screen holder bracket 19 attached to hinge pin 13 and showing the operational movements of approximately 240°.

Figure 13 shows in perspective a clamp 12 with safety strap 21 and velcro hook and loop fastening 22 and 23. The

clamp 12 however, is fitted with a hinge bush 14 which has an inside diameter corresponding to the outside diameter of the fixed double hinge pin assembly which consists of an end plait 24 attached to which are two hinge pins 13 the upper pin shows near its end a notch 25 on the top and the lower pin a notch opposite at the bottom 25. Assembling the parts consists of attaching the tinted screen holder bracket 19A which is moulded with an inbuilt hinge bush 14B by first placing a hard faced rubber washer 26 over the hinge pins 13 to the fixed back plate 24 pushing the hinge pins through the hinge bush 14 and the screen holder bracket bush 14B; the second hard faced rubber washer 26 to be placed over the protruding notched ends of the fixed hinge pins 13 then pressed hard against the end lug 15 and the end of the screen holder 19A which is of a comparable breadth as the outside faces of the two lugs 15 the keeper clip 27 is then pressed over the top and bottom notches 25 of the hinge pin 13 and by design will lock into the two notches 25. The pressure of the two hard faced rubber washers 26 will create frictional hinging by means of the top fixed pin 13 revolving inside the clamps hinge bush 14 and the screen holder bracket bush 14B revolving around the lower fixed hinge pin 13 with both these movements in conjunction with each other a full 360° for the tinted screen is available. The screen holder bracket 19B can also be fitted in this manner and is also designed to adjust grip by means of a countersunk threaded nut and bolt 16.

Figure 14 shows a clamp 12 with attachments described in Figure 13 showing the 360° movements of the components. Figure 15 shows the completed assembly as described in Figure 13 with an end view of the tinted screen holder bracket 19A or 19B with attached tinted screen 11.

Figure 16 shows the fitment as described in Figure 4. Figures 17, 18, 19 and 20 previously described in Figures 2, 3, and 4. Figure 21 shows a vehicles visor 10 wire skeleton 38 with bottom left and right end modifications which are designed to accept a fitting of a plastic moulded hinge bracket in order that tinted screen 11 can be fitted to vehicle's visors without clamps, straps etc. The modification

consists of the extra bend areas at each end of the lower horizontal wire 39 as shown or one central one not shown, that when the padding and outer finished cover cloth is applied and completed, a partial exposure of the flanked bend 39 would be protruding from these areas of the visor 10 to which is added a moulded plastic hinge bracket of semi-rigidity designed to fit firmly to the protruding wire bends.

Figure 22 shows four drawings of the plastic moulded hinge bracket 37 A B C D. "A" shows a side view of the hinge bracket at its lower area shows a hinge pin 13 or hinge bush 14 attached to two lugs 15 above this the double dotted lines which show the kindred wire bend 39 inserted into a slot 41 from the top of the hinge bracket, the centre of the bracket shows a threaded nut and bolt 16 situated through the inside loop of the wire 39 the top shows a curved apron 40. Drawing "B" shows a top elevation view of the hinge bracket 37 in which a longitudinal slot 41 cut to a depth to let the wire loop 39 the double dotted lines going across the slotted centre 41 is a countersunk threaded unit and bolt 16 and along each side a curved apron 40. Drawing "C" is an end view of the hinge bracket 37 which shows end of hinge pin 13 or bush 14; the vertical dotted lines shows the end of the wire loop 39, the horizontal double lines shows the position of the countersunk threaded nut and bolt 16 and at the top the curved apron 40. "D" shows a right-angled bracket 43 with the same design and fitting. Application is made by removing the countersunk bolt 16 then pushing the plastic moulded hinge bracket 37 over the wire loop 39 and up firmly until the apron 40 is curved, tightly over the lower edges of the completed vehicle visor 10 the threaded bolt 16 is then replaced which would be positioned inside wire loop 39 and tightened to the countersunk nut. The bracket cannot come off not can it move in any other direction it would be secured in position over the wire loop 39. All the hinge fitments previously described can be fitted to their adaptation.

Figure 13 shows the same as Figure 21 with the wire loops at each lower corner 39 and which will also accept the semi-

ridged plastic moulded hinge brackets "A" and "D" in Figure 22 fitting in exactly the same method.

Figure 24 shows a modified vehicle visor 10 wire skeleton the same as Figures 21 and 23 except that at each end it has round plastic moulded covering at these end areas 42 with a wider area to allow snap-on and split double hinge bush 14D hinge fittings.

Figure 25 shows a fully round plastic moulded vehicle visor 10 wire with a central hinge pin area 44 to accept hinge fittings as Figure 24.

CLAIMS

1. An anti-dazzle shield comprising a tinted screen of a length comparable with a vehicle visor which is frictionally hinged at its upper edge, and means for frictionally hingedly mounting the upper edge of the screen to the lower edge of the visor.
2. An anti-dazzle shield according to claim 1, wherein the mounting means comprises a clamp adapted to be mounted on the visor for receiving a snap-on visor bracket.
3. An anti-dazzle shield according to claim 2, wherein the mounting means also comprises a safety strap attached to the clamp for hooking over the visor.
4. An anti-dazzle shield according to claim 2 or 3, wherein the bracket comprises flaps which snap over a mounting pin of the clamp.
5. An anti-dazzle shield according to claim 3 or 4 when dependent on 3 wherein the strap is provided with means for adjusting the length of the strap in order that the strap may be used on visors of different heights.
6. An anti-dazzle shield substantially as hereinbefore described with reference to Figs 1 and 3-25 of the accompanying drawings.

Patents Act 1977**Examiner's report to the Comptroller under -IC-
Section 17 (The Search Report)**

Application number

9105866.9

Relevant Technical fields

(i) UK Cl (Edition K) B7J

(ii) Int CL (Edition 5) B60J 3/02

Databases (see over)

(i) UK Patent Office

(ii)

Search Examiner

COLIN THOMPSON

Date of Search

9 JUNE 1992

Documents considered relevant following a search in respect of claims

1 TO 6

| Category (see over) | Identity of document and relevant passages | Relevant to claim(s) |
|------------------------|------------------------------------------------------------|-------------------------|
| X | GB 2232136 A (RUSSELL) whole document relevant | 1, 2 |
| X | GB 2194497 A (ORR) see especially page 2 lines 62-77 | 1, 2, 3, 4 |
| X | GB2156294 A (SEYMOUR-BLACKBURN) whole document relevant | 1, 2, 3 |
| X | GB 2153313 A (CROWTHER) whole document relevant | 1, 2 |
| X | GB 530089 (HORSTMANN) whole document relevant | 1, 2 |
| X | EP 0345374 A1 (AIZAWA) whole document relevant | 1, 2, 3 |

| Category | Identity of document and relevant passages | Relevant to claim(s) |
|----------|--------------------------------------------|----------------------|
| | | |

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).